

Remarks/Arguments

Claims 18-24 and 32-41 are pending.

Claim 18 has been amended to incorporate the limitation recited in claim 31. Consequently, claim 31 has been canceled and claim 32 has been amended to depend from claim 18; claim 33 has been amended to be consistent with amended claim 18.

The Examiner rejected former claim 31 (and other claims including former claim 18) under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (US 2002/0090649) in view of Kayyem et al. (USP 6,090,933) and Genshaw et al. (USP 5,620,579). The Applicant respectfully traverses this rejection for at least the following reasons.

Claim 18 as amended recites "irreversibly oxidizing said ferrocene compound during said forming said electrochemical chip" (emphasis added).

The Examiner appears to admit that neither Chan et al. nor Kayyem et al. discloses oxidizing a ferrocene compound to form an oxidized mediator, but relies on Genshaw et al. for disclosing an oxidized mediator by oxidizing a reduced form of the mediator. The Examiner further asserts that a number of techniques disclosed in Chan et al. would meet the recited limitation of "irreversibly oxidizing the ferrocene" compound.

However, careful review of Genshaw et al. reveals that it discloses a ferrocenium mediator (ferricyanide) that is reducible (to ferrocyanide) and needs to be re-oxidized during use. Indeed, the stated object of Genshaw et al. is to provide a method for returning the reduced compound back to its oxidized state just prior to analyte determination. See Abstract and col. 3, ll. 53 to 58; col. 4, line 58 to col.5, line 9 of Genshaw et al. Although Genshaw et al. alludes to the desirability of having a mediator that is able to remain in the oxidized state prior to the use of the sensor (see col. 3 ll. 24-27), it further states that "It has been discovered that these mediators do tend to be reduced over time" (col. 3, ll. 28-29). Thus, according to Genshaw et al., irreversible oxidization of the ferrocenium mediator disclosed therein is not workable. Genshaw

et al. not only fails to disclose or suggest a process in which a ferrocene compound is irreversibly oxidized in a coating on an electrode during the formation of an electrochemical chip as recited in current claim 18, it also teaches away from modifying Chan et al. to arrive at the method of current claim 18 (or former claim 31) in the manner suggested by the Examiner. In view of the disclosure in Genshaw et al., a person skilled in the art would not expect such a modification to work and simply would not attempt to do so.

While there might be techniques known to persons skilled in the art, such as cyclic voltammetry, which could be used to irreversibly oxidizing an irreversibly oxidizable compound, there is no disclosure or suggestion in the cited references, either alone or in combination, that irreversibly oxidizing a ferrocene compound in an electrode coating in combination with other features recited in amended claim 18 would be desirable or provide any advantages. There is not even any disclosure or suggestion in the cited references that any ferrocene compound disclosed therein is irreversibly oxidizable. By contrast, the inventors of the present application discovered that an irreversibly oxidized ferrocene compound in the electrode coating can be obtained and can provide “a stable electrical resistance at the electrode interfaces” (see paragraph [0049] of the specification).

The other cited references, either alone or in combination, do not cure the above defect of Chan et al. and Genshaw et al. Therefore, it is respectfully submitted that claim 18 as amended is patentably distinguishable from the cited references. As claims 21-24, and 32-39 as amended all depend from claim 18 directly or indirectly, these claims are also believed to be allowable over the cited references. Withdrawal of all claim rejections under 35 U.S.C. 103(a) is thus respectfully requested.

The Applicant thanks the Examiner for indicating that claims 19 and 20 are allowed and that former claims 34-36 are allowable if presented in independent form including all of the limitations of the base claim and any intervening claim. Former claims 34-35 are now presented as new claims 40-41, which are believed to be allowable.

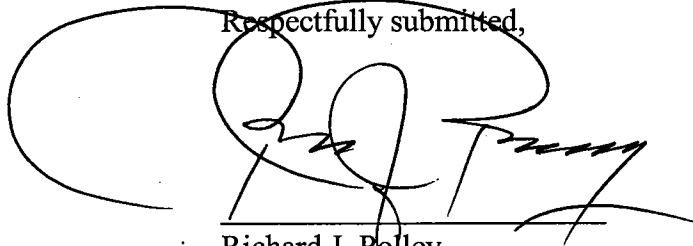
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No new matter has been added.

In view of the foregoing, early favorable reconsideration and allowance of this application are earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Richard J. Polley', is written over a horizontal line. The signature is stylized with large, sweeping loops.

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